1 PREMISE

1.1 QRCODE

1.2 AVAILABLE LANGUAGES

For versions of this Instruction sheet in other languages, see Robur website.

1.3 KEY TO SYMBOLS

DANGER

WARNING

NOTE

PROCEDURE

REFERENCE (to other document)

2 WARNINGS

For correct installation, please refer to the manual included in the appliance and to these installation and operation instructions.

Please read the warnings and instructions for use contained in these instructions carefully as they provide important information regarding safe installation and use. Keep this sheet carefully for further reference. The manufacturer cannot be held responsible for any damage caused by improper, erroneous or unreasonable use.

Installer's qualifications

Installation must exclusively be performed by a qualified firm and by skilled personnel, with specific knowledge on heating and electrical systems, in compliance with the laws in force in the Country of installation.

The design, installation, operation and maintenance of the systems shall be carried out in compliance with current applicable regulations, depending on the Country and location, and in accordance with the manufacturer's instructions. In particular, regulations regarding the following shall be complied with:

- ► Electrical systems and equipment.
- ► Fire safety and prevention.
- ► Any other applicable law, standard and regulation.

Any contractual or extra-contractual liability of the manufacturer for any damage caused by incorrect installation and/or improper use and/or failure to comply with regulations and with the manufacturer's directions/instructions shall be disclaimed.

This operation must be curried in total safety. Before starting intercept the gas and disconnect the power supply.

3 DESCRIPTION

The OSWR000 Genius remote control software is a software program to be installed on a Windows PC that allows, through the OTRG005 thermoregulators, to centrally manage up to 100 Robur Next gas unit heaters.
Gas heaters control can be independent (i.e. delegated to the individual OTRG005) or centralised.
The software allows you to:

- ► Manage up to 100 gas heaters divided into 10 zones.
- ► Set the temperature for each zone.
- ► Set the operating times of each zone.
- ► Set the operation of the gas heaters to 3 temperature levels.
- ► Set the operating mode of each gas heater (heating, off, ventilation only).
- ► Reset of gas heaters lockout (when possible).
- ► Send information emails about start/stop/lockout of the system to the desired addresses (if the PC is connected to an email system).

If the PC on which the software is installed is remotely accessible, the software allows remote management of the entire heating system from multiple devices.
The communication between the PC on which the software is installed and the OTRG005 thermoregulators takes place via Modbus protocol, while a USB/RS485 converter

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(supplied) allows the PC to physically interface with the communication network.

4 FEATURES

This optional consist of:

► USB/RS485 serial converter

► USB pen drive containing the software for remote control of Next gas heaters.

5 MINIMUM SYSTEM REQUIREMENTS

The minimum system requirements for software installation are:

► Operating system Windows 7 SP1 or later.

► At least 350 MB disk space.

► 2 GB RAM or more.

► USB 2.0 port or higher available.

6 SETUP OF THE MODBUS NETWORK

How to build the Modbus network

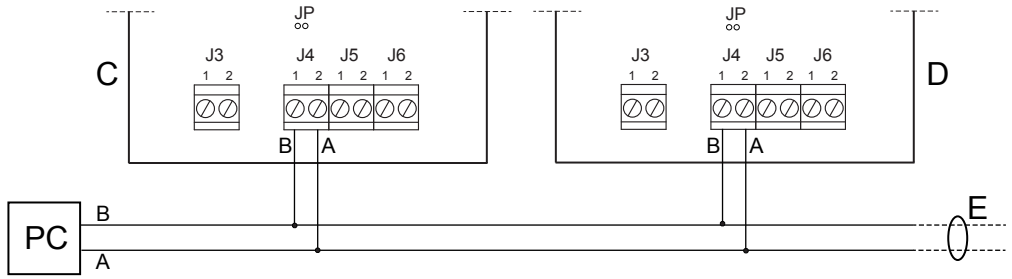
1. We recommend using an unshielded 2x0,5 mm^2 twisted cable.
2. Connect the OTRG005 thermoregulators in parallel, as shown in Figure 6.1 *p. 2*.
3. Check that the JP jumper is open on all thermoregulators.

The JP jumper is used to terminate the Modbus line (the rightmost thermoregulator in Figure 6.1 *p. 2*), in order to make the network less affected by external interferences. It is not recommended to close the JP jumper as this will cause the signal to drop. If the JP jumper is closed, a 120 Ω resistance must be provided on the first and last node of the Modbus chain (in Figure 6.1 *p. 2* the PC is the first node and the last thermoregulator on the right is the last node).

4. Check that the resistance at terminals A and B of the cable on the side to which the PC is to be connected is about 15,1 kΩ divided by the number of thermoregulators connected to the Modbus cable (for example, if 10 thermoregulators are connected, the measured resistance should be about 1,5 kΩ).
5. Connect pins A and B of the PC-side cable to the corresponding terminals of the USB/RS485 converter.

Do not plug the converter into the USB port of the PC until the CDM20830_Setup.exe software stored on the USB pen drive has been installed.

Figure 6.1 *Modbus network connection diagram*



A A signal
B B signal
C Thermoregulator #1
D Thermoregulator #2
E Twisted cable
JP Open Jumper
PC Computer where to install OSWR000 software

7 SOFTWARE SETUP

The USB pen drive supplied includes software that must be installed on the PC used for remote control of gas heaters.

How to install the software

1. Insert the supplied USB pen drive into a USB port on your PC.
2. Open the "ControlRoburNEXT" folder on the pen drive.
3. Double-click "CDM20830_Setup.exe" to install the software for the USB/RS485 serial converter.
4. After installation is complete, insert the USB/RS485 serial converter into a USB port on your PC and wait until the installation of the device drivers is complete.
5. Check which COM port the USB/RS485 converter uses (e.g. COM4, or COM14, etc.), as follows:
   - For Windows 10: right-click on the Start menu, select "Device Manager" -> "Ports (COM and LPT)" -> "USB Serial Port".
   - For Windows 7: Left-click on the Start menu, select "Control Panel" -> set "View by: Small icons" -> "System" -> "Device Manager" -> "Ports (COM and

LPT)" -> "USB Serial Port".

6. Open the "ControlRoburNEXT\Volume" folder and double-click "setup.exe" to install the "ControlRoburNEXT.exe" software. By default it is proposed to install the software in the "C:\Program Files (x86)\ControlRoburNEXT\" folder.
7. To complete the installation, the software requires the PC to be restarted.
8. In the folder chosen for installation (by default "C:\Program Files (x86)\ControlRoburNEXT"), open the file "Modbus.ini" with a text editor (for example "Notepad") and update the COM port in [Modbus] with the value read in step 5.
9. If the COM port number is greater than 10, you must put the characters "\\.\" after the equal sign (Figure 7.2 *p. 3*). For example:
   - COM = COM4 because less than 10 (Figure 7.1 *p. 3*)
   - COM = \\.\COM14 because greater than 10 (Figure 7.2 *p. 3*)
10. Once updated the COM port in the file "Modbus.ini", save the changes and close the file.

Figure 7.1 *COM port setting (value less than 10)*

```
[Modbus]
COM = COM4
baud = 19200
parity = E
data= 8
stop = 1
```

Figure 7.2 *COM port setting (value greater than 10)*

```
[Modbus]
COM = \\.\COM14
baud = 19200
parity = E
data= 8
stop = 1
```

If your operating system does not allow you to edit and save the file "Modbus.ini", you need to copy the file out of the "Program Files (x86)" folders, perform the required change, save the file and replace it in the original folder.

8 CONFIGURATION OF OTRG005 THERMOREGULATOR PARAMETERS

For further information on the configuration of the parameters of the OTRG005 thermoregulator, refer to the instructions supplied with the thermoregulator.

The sequence in which the thermoregulators are connected to the communication network is not important. The important thing is to assign the appropriate Ad address as indicated above.

8.1 ADDRESS (AD)

The address (Ad) parameter of the OTRG005 thermoregulator is used to uniquely identify the gas heater connected to the thermoregulator.
The address must be assigned sequentially and consecutively starting from 1. For example, if the system is composed of 9 gas heaters divided into 3 zones, with 3 gas heaters each, it follows that each zone must be subdivided as follows:

► Zone 1 comprising elements 1, 2 and 3.
► Zone 2 comprising elements 4, 5 and 6.
► Zone 3 comprising elements 7, 8 and 9.

To set the Ad address it is necessary to access the parameter menu of the thermoregulator connected to the gas hetater.
For further information please refer to the instructions supplied with the OTRG005 thermoregulator.

8.2 DIFFERENTIAL (DI), HYSTERESIS (HY), MODULATION (MO)

To configure the differential (di), hysteresis (HY) and modulation (Mo) parameters, first read these instructions and then refer to the instructions supplied with the thermoregulator.

8.3 SAFETY TEMPERATURE (ST)

The safety temperature (St) parameter allows you to set the value of the local setpoint temperature in case the OTRG005 thermoregulator loses Modbus communication (for example due to electrical connection problems or if the software on the PC crashes).
In case of loss of Modbus communication, after two minutes the thermoregulator independently sets itself in safety mode heating (SM) to maintain the ambient

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temperature set in the St parameter (range 3 ÷ 25 °C).

The safety temperature (St) parameter is off by default (value of), and therefore, in case of loss of Modbus communication, the gas heater will remain off. To change the default setting, access the parameter menu of the OTRG005 thermoregulator.

9 SOFTWARE UPDATE

The Genius software can be updated to version 1.2.2 from version 1.2.1 with the following operations:

1. Uninstall the previous version of the software:
   - For Windows 10: From the start menu select "Settings" -> "App" -> locate the ControlRoburNEXT application in the list -> "Uninstall".
   - For Windows 7: From the start menu select "Control Panel" -> set "View by: Small icons" -> "Programs and Features" -> locate the ControlRoburNEXT application in the list -> "Uninstall".
2. Install the current version of the software (version 1.2.2), Paragraph 7 *p. 2*.
3. Perform the system configuration again, Paragraph 10 *p. 4*.

The settings of the previous version are not retained after the update.

To recover the previous settings you need to locate the configuration file "SetupAirGeneratorsNext.txt" which is usually located in the folder "%localappdata%\VirtualStore\Program Files (x86)\ControlRoburNEXT\Setup".
By opening this file with a text editor (e.g. "Notepad") you can read the settings of the previous version, which must be manually set for the updated version.
It is not possible to reuse the configuration file of the previous version with the updated version, as the data are not compatible with each other.

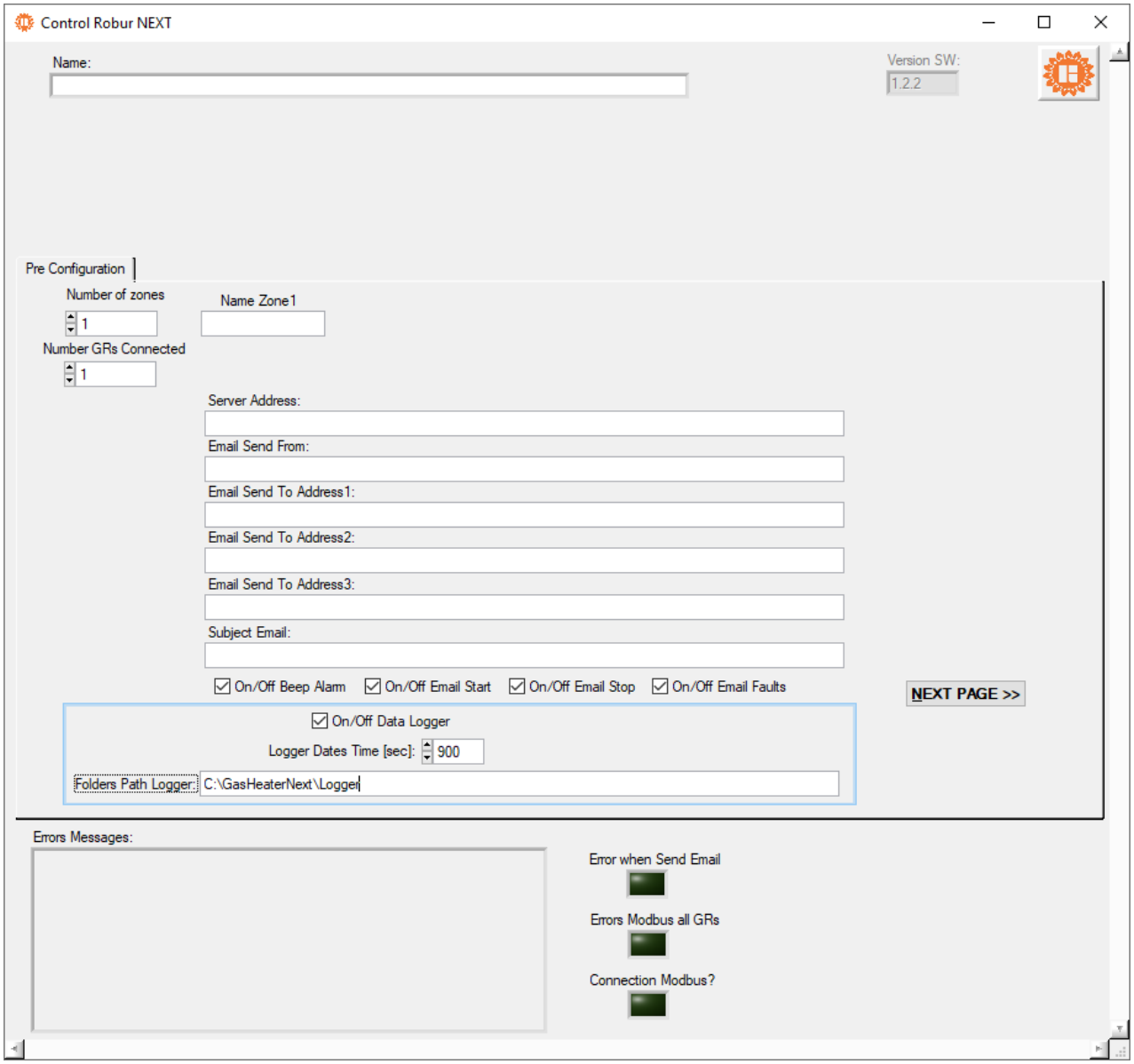
10 USING THE SOFTWARE

The operating instructions refer to the version 1.2.2.

10.1 STARTING THE SOFTWARE

1. In the Start menu, search for the "ControlRoburNEXT" folder and launch the ControlRoburNEXT application (icon).
2. The page shown in Figure 10.1 *p. 5* will appear.
3. At the first start, fill in the field "Name:" with the name of the plant (up to 100 characters).

Figure 10.1 *"Pre Configuration" page*



10.2 "PRE CONFIGURATION" PAGE

1. In the field "Number of zones" type the number of zones that make up the plant, from a minimum of 1 to a maximum of 10, and press enter.
2. Based on the number of zones entered in the "Number of zones" field, an equal number of fields "Name Zone" appears (example in the case of 3 zones in Figure 10.2 *p. 6*) in which the name of the corresponding zone is entered (up to 15 characters). Names can also be left blank, however their insertion, especially if there is more than one zone, makes it easier to find the zone on which you will then make the settings.

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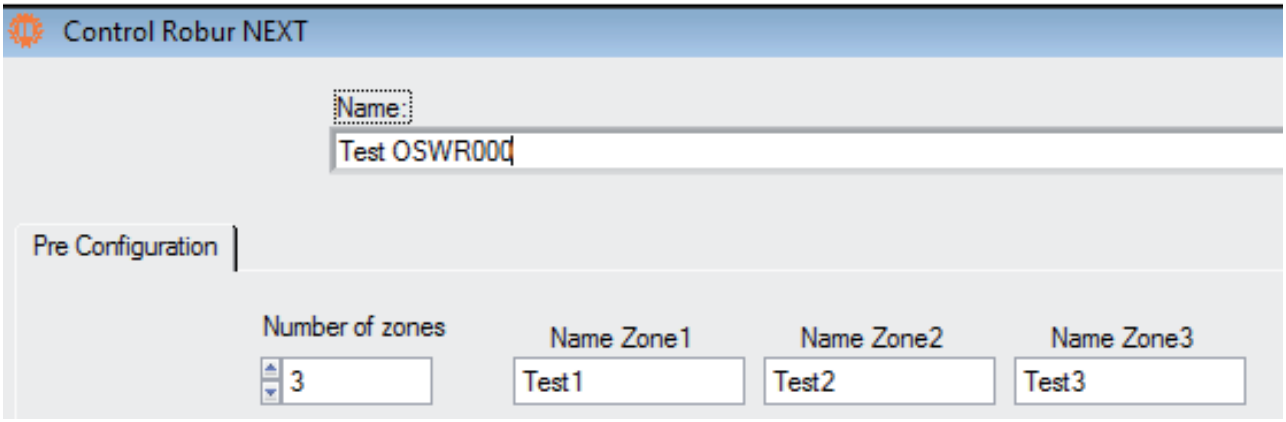
Figure 10.2 *Zone names*



3. In the field "Number GRs Connected" enter the number of gas heaters that make up the entire system (minimum 1, maximum 100).
4. In the field "Server Address:" type the address of the email server used to send any diagnostic messages (example: smtp.gmail.com, up to 100 characters).
5. In the field "Email Send From:" type the email address of the sender of the message (up to 100 characters).
6. In the field "Email Send To Address1:" type the first email recipient (up to 100 characters).
7. In the field "Email Send To Address2:" type the second email recipient (up to 100 characters).
8. In the field "Email Send To Address3:" type the third email recipient (up to 100 characters).
9. In the field "Subject Email:" type the subject of the email (example: "Message from Robur heating system", up to 100 characters).

The fields in steps 4-9 can be left blank in case your PC can't send emails or you do not want to use this feature. When you change the page, a notification will appear reminding you that you did not enter the email server address, but you can still continue to the next page.

10. In the field "On/Off Beep Alarm" you can activate or deactivate a sound signal (beep) that the PC will emit in case of a fault in the gas heaters or malfunction of the Modbus communication.
11. In the "On/Off Email Start" field you can enable or disable the sending of an email when the system starts up (through the button "START ZONES >>", Figure 10.3 *p. 7*).
12. In the "On/Off Email Stop" field you can enable or disable the sending of an email when the system switches off (through the button "STOP", Figure 10.6 *p. 13*).
13. In the "On/Off Email Faults" field you can activate or deactivate the sending of an email in case of a fault in the gas heaters or malfunction of the Modbus communication.
14. In the field "On/Off Data Logger" you can activate or deactivate the data logger of gas heaters.
15. In the "Logger Dates Time [sec]" field you can set the system scan time. The data are acquired by scanning all the gas heaters that make up the system at the set time. The scanning time is selectable from 10 to 3600 seconds.
16. The data is recorded to the folder you typed in the "Folders Path Logger:" field. By default, the software proposes to save the data in "C:\GasHeaterNext\Logger". The path can be modified and is saved when you click the "NEXT PAGE >>" button. If folders don't exist, they are created by the software.

Filling in the "Folders Path Logger:" folder is required to continue to the next page.

17. If the "On/Off Data Logger:" field is active, the data is recorded in the folder specified in "Folders Path Logger:". The log records various data acquired by the system, useful for providing historical information on the system operation. The data is automatically divided into daily Excel files. The file name is composed with month_day_year and extension .xls, for example: "May_31_2018.xls".

► Each row shows the data of only one gas heater.
► The columns show the following gas heater data: "Date", "Hour", "N° Zone", "N° Gas Heater", "Tsetpoint [°C]", "Tprobe [°C]";, "Operating", "Functionality", "Winter/Summer", "Error Message" and "Anomaly ModBus Message".

To avoid errors, open the log file only when it is not in use by the software. The file in use is the one with today's date. If you want to open the file that the software is using, create a copy of it and then open it.

18. When you are finished filling in the fields on this page, press the "NEXT PAGE >>" button to continue.

If the fields "Server Address:", "Email Send From:" and at least one of the fields "Email Send To Address:" are not filled in, when you press the button "NEXT PAGE >>", the popup "Error use email" appears with the "To send emails, please check: Server Address, Email Send From, Email Send To Addresses. Button PREVIEW PAGE to modify the settings" warning.

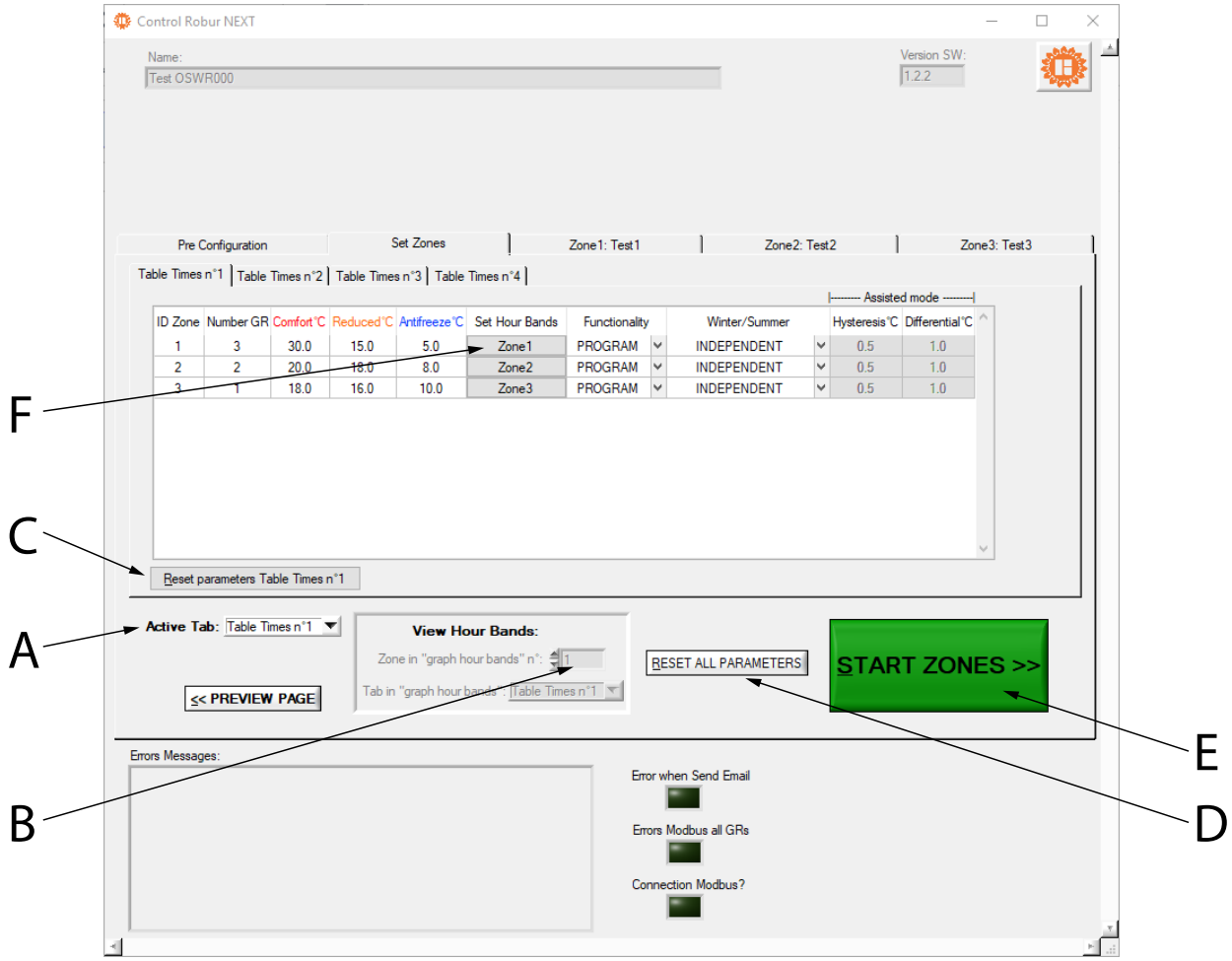
If the USB-RS485 converter does not work correctly, when you press the "NEXT PAGE >>" button the "Error device USB-RS485" popup appears with the "Please check the USB-RS485 device and its configuration" warning.

- Check that the USB/RS485 converter is firmly plugged into the USB port of the PC (the green LED on the converter must be on).
- Check that the USB port used by the USB/RS485 converter is correctly configured (Paragraph 7 *p. 2*).

10.3 "SET ZONES" PAGE

1. The "Set Zones" page appears as in Figure 10.3 *p. 7*.

Figure 10.3 *"Set Zones" page*



A Allows selection of the "Table Times" page that you want to display
B Allows you to enter the number of "Table Times" for which you want to display the "Graph Hour Bands"
C Allows resetting to default values of the active "Table Times"
D Allows resetting to default values of all parameters
E Saves settings and turns on the system
F Allows you to set the time slots for the specific zone and "Table Times"

2. To access the configuration pages "Table Times n°1", "Table Times n°2", "Table Times n°3" and "Table Times n°4" you must select the desired table from the drop-down menu "Active Tab:" (detail A, Figure 10.3 *p. 7*).
3. Each "Table Times" consists of a zone configuration table, with the number of lines equal to the number of zones set in the "Number of zones" field of the "Pre Configuration" page (Figure 10.1 *p. 5*). The four tables have the same number of rows and columns and allow you to store and choose four different modes of operation of the system.
4. To change the numbers in the tables, double-click on the number: the cell being modified displays the arrows for increasing and decreasing the number.
5. The **ID Zone** column cannot be edited and displays the progressive zone number.
6. In the column **Number GR** type the number of gas heaters in each zone (minimum 1 maximum 100 gas heaters). The column **Number GR** can only be changed in the page "Table Times n°1", in the other pages "Table Times n°2", "Table Times n°3" and "Table Times n°4" is read-only.

If the number of gas heaters typed in the box of each individual zone is greater than the number set in "Number GRs Connected" on the "Pre Configuration" page (Figure 10.1 *p. 5*), the popup "Error number of gas heaters" appears

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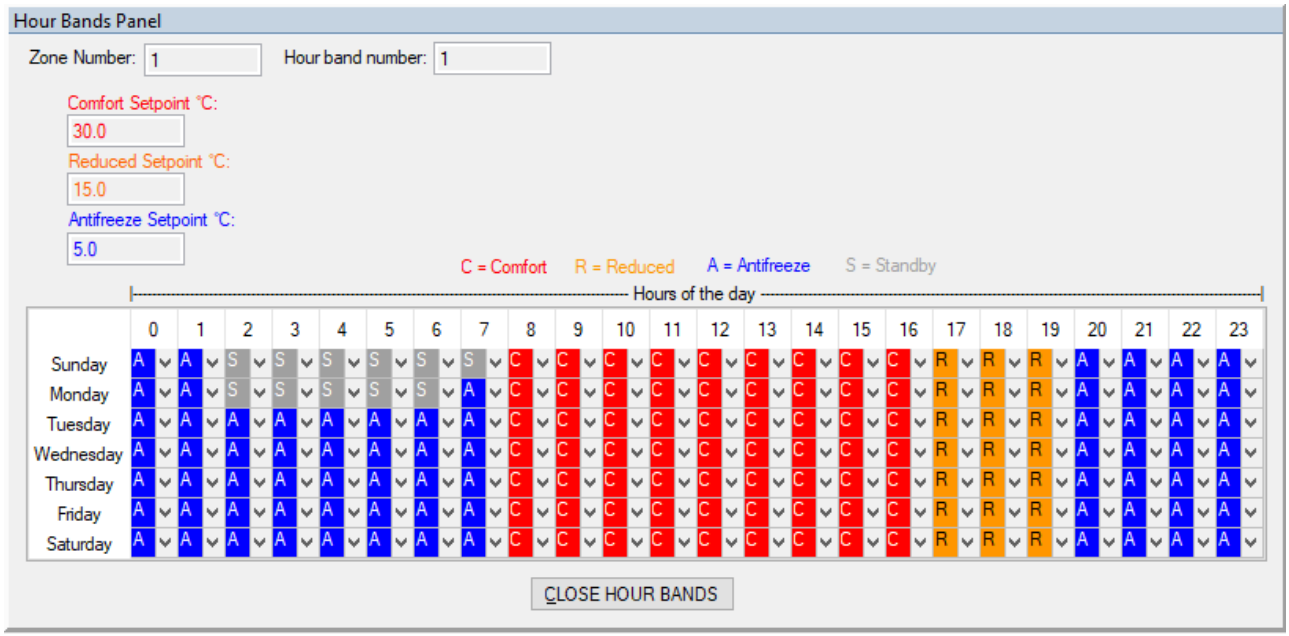
with the "The number of gas heaters in this zone are more of the gas heaters number connected!" warning and the number is automatically reduced to the value set in "Number GRs Connected".

7. In the **Comfort°C** column type the desired comfort temperature in each zone (range 5 ÷ 30 °C).
8. In the **Reduced°C** column type the desired reduced temperature in each zone (range 5 ÷ 30 °C).
9. In the **Antifreeze°C** column type the desired antifreeze temperature in each zone (range 5 ÷ 30 °C).
10. To set the hourly programming ("Hour Bands") of a specific zone, press the button relative to the zone in the "Set Hour Bands" column (detail F, Figure 10.3 *p. 7*).
11. The table in Figure 10.4 *p. 8* opens, showing at the top, read-only, the number of the zone and of the "Hour Band" you are setting and the relative setpoints (which were previously set for the specific zone and "Table Times").

Figure 10.4 *"Hour Bands" page*



12. For each combination of day and time slot you can set the operating mode in one of four available modes:
    - C for heating with comfort setpoint.
    - R for heating with reduced setpoint.
    - A for antifreeze mode.
    - S for standby (system off).
13. You can copy the settings of one row or column to others by selecting the row or column of interest (or the entire table if you want to copy it to another "Table Times") and using the key combinations CTRL+C (copy) and CTRL+V (paste).

Take care to restore the correct value of the first cell from which you copy, if the value is different from C, as the copy operation automatically changes the value of the first cell to the C value.

14. To exit the "Hours Bands" programming press the "CLOSE HOUR BANDS" button below the table.

As long as the system has not been started up ("START ZONES > >" button in green) you can view and change the time slots as shown above. Once the system has been started up, to display the time bands set for each zone and each "Table Times", it is necessary to use the "View Hour Bands" function, specifying the zone and the "Table Times".

15. In the **Functionality** column select via the drop-down menu:

► "PROGRAM" if the zone is to work with the daily and weekly time slots, set as above.
► "MANUAL" if the zone must always operate in comfort mode.
► "OFF" if the zone must be excluded from the system, for example for gas heaters maintenance (see parameter "State" in Paragraph 10.5 *p. 11*). With "Functionality" set to "OFF" it is possible for each gas heater in the zone to disconnect the power supply and the Modbus communication cable without generating alarms or faults in the software.

Before turning off the power supply to all the thermoregulators, to improve safety, press the red "STOP" button (Figure 10.6 *p. 13*). Only reactivate the software with the "START ZONES >>" button when all the thermoregulators are powered again.

If you have only removed power from some thermoregulators, such as the zone in "OFF", to avoid any Modbus errors, press the red "STOP" button

(Figure 10.6 *p. 13*) and include the excluded zone ("OFF"), using the desired mode ("PROGRAM" or "MANUAL") before turning them on again.

If Modbus errors arise (reported by the software), the software first excludes the faulty thermoregulators, then:

- If all thermoregulators are excluded due to Modbus errors, the "Errors Modbus all GRs" led (detail B in Figure 10.6 *p. 13*) turns red. The software automatically opens the communication and waits for at least one thermoregulator to send a signal. The led "Connection Modbus?" turns red (detail C in Figure 10.6 *p. 13*). Once the first signal is received, the software re-initialises the system, including the thermoregulators that communicate and excluding the others. Then, if there are still some thermoregulators with Modbus errors, it continues reactivating them periodically as described in the next step. This is the case, for example, in the event of an electrical blackout of the entire system.
- If only some thermoregulators have been excluded from the software by a Modbus fault, they are cyclically reactivated to check if they can be used or excluded again. This is the case, for example, when the power supply has been cut off in only a few thermoregulators.

You can activate the sending of emails of these faults (with checkbox "On/Off Email Faults") and record them in the event history (with checkbox "On/Off Data Logger"). With "On/Off Email Faults" enabled events are reported when they occur, with "On/Off Data Logger" enabled events are recorded when they first occur and when they end.

16. In the **Winter/Summer** column, select from the drop-down menu:

► "INDEPENDENT" if the zone must work with each gas heater independent from others, managed by its own thermoregulator and by its own room probe (recommended operating mode). The setpoint temperature is communicated by the software to the thermoregulator according to the mode set in the **Functionality** column. The setpoint temperature (communicated by the software) and the temperature measured by the thermoregulator itself with the room probe are used by the thermoregulator together with its differential (di) and hysteresis (HY) parameters to establish the gas heater operation (off or operating at minimum or maximum power). For further information please refer to the instructions supplied with the thermoregulator. To use this mode, check that the Mode (Md) parameter of the thermoregulator is set to 0 (remote independent operation mode), which is the default value.

► "ASSISTED ON/OFF" if the zone must work to reach the average temperature (read by the thermoregulator probes of the zone) corresponding to the value set in the "Functionality" mode. The average temperature is calculated using the room temperature probes of the not excluded thermoregulators (see "State" parameter Paragraph 10.5 *p. 11* and "Functionality" = "OFF") that make up the zone. The regulation uses only the hysteresis parameter (Hysteresis°C), set through the Genius software, as the gas heater only operates in on/off mode (Figure 10.5 *p. 10*). To use this mode, check that the Mode (Md) parameter of the thermoregulator is set to 1 (remote assisted operation mode).

► "ASSISTED MODULATION" if the zone must work to reach the average temperature (read by the thermoregulator probes of the zone) corresponding to the value set in the "Functionality" mode. The average temperature is calculated using the room temperature probes of the not excluded thermoregulators (see "State" parameter Paragraph 10.5 *p. 11* and "Functionality" = "OFF") that make up the zone. The regulation uses the hysteresis (Hysteresis°C) and differential (Differential°C) parameters, set through the Genius software, to establish the operation of all the gas heaters making up the zone (switched off or operating at minimum or maximum power) (Figure 10.5 *p. 10*). To use this mode, check that the Mode (Md) parameter of the thermoregulator is set to 1 (remote assisted operation mode).

► "VENTILATION" if the zone must work with its gas heaters in summer mode (burners off). Gas heaters operate in ventilation mode during comfort and reduced time slots regardless of the value measured by the zone thermoregulator's room probes, while they are switched off during the antifreeze or standby time slots.

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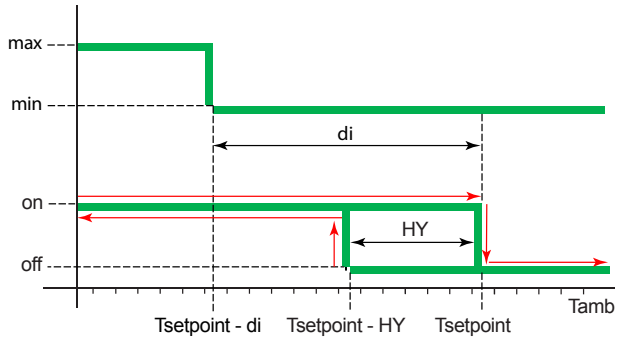
Figure 10.5 *Remote independent/assisted mode operation diagram (on/off or modulating)*



di Differential
HY temperature hysteresis
Tamb Ambient temperature
Tsetpoint Setpoint

NOTE

INDEPENDENT In this mode, the thermoregulators use their parameters, differential (di) and hysteresis (HY), to operate the gas heaters.

ASSISTED MODULATION In this mode, the operation of gas heaters is regulated by the HY°C and DI°C parameters set in the Genius software.

ASSISTED ON/OFF In this mode the operation of gas heaters is regulated by the HY°C parameter set in the Genius software.

17. Depending on the operating mode chosen, the software makes available or unavailable (grey background cells) the possible setting of the hysteresis (Hysteresis°C) and differential (Differential°C) parameters.

18. In the column **Hysteresis°C** type the value for the on/off operation hysteresis of the zone gas heaters operating in the "ASSISTED MODULATION" or "ASSISTED ON/OFF" mode.

19. In the **Differential°C** column, type the value for differential of the zone gas heaters operating in the "ASSISTED MODULATION" mode.

Check that the modulation (Mo) parameter of the thermoregulator is set to 1 (with modulation).

20. The table "Table Times n°1", "Table Times n°2", "Table Times n°3" or "Table Times n°4" that determines the system operation is the one selected in the box "Active Tab:".

Each table "Table Times" can be reset to default values using its "Reset parameters Table Times" button (detail C Figure 10.3 *p. 7*).

All parameters can be reset to default values (initial conditions of first configuration) using the "RESET ALL PARAMETERS" button (detail D Figure 10.3 *p. 7*).

10.4 STARTING THE SYSTEM

1. In the "Set Zones" page (Figure 10.3 *p. 7*) press the "START ZONES >>" button to save the settings and turn on the system.

2. The zone tables are automatically populated based on the number of rows entered in the column **Number GR** and the previously set parameters are used for system operation. When you press the "START ZONES >>" button, all previously set parameters are saved to a file and used as default each time you start the software.

If the sum of the number of gas heaters for the individual zone, set in the **Number GR** column, is greater than the value set in "Number GRs Connected" in the "Pre Configuration" page (Figure 10.1 *p. 5*), the popup "Error number of gas heaters" appears with the "The number of gas heaters 'Number GRs Connected' in the page 'Pre Configuration', is different from the sum of those in the column 'Number GR' of page 'Set Zones'! Restart the program and check these parameters of plant configuration" warning and the application is closed (saving the previously set data, but without starting the plant).

The parameter Ad (address) of each thermoregulator must coincide with the identification number of the generator "ID GR" (Figure 10.6 *p. 13*). Because regardless of the number of gas heaters present in each zone and the number of zones, the number "ID GR" is automatically assigned by the software in a sequential way starting from 1 for the first gas heater until the last one, it is therefore essential to respect the identical sequential numbering when setting the Ad parameter value of thermoregulators, see Paragraph 8.1 *p. 3*.

When the "START ZONES >>" button is pressed, if the checkbox "On/Off Email Start" is active, the software tries to send the system start email "Starting the system". If sending errors occur, the led "Error when Send Email" turns red, the popup "Error E-mail Send" appears with the warning "Please check E-mail configuration" and the checkbox "On/Off Email Faults" is disabled to prevent any software malfunction due to a useless attempt to send email. When the red "STOP" button is pressed (Figure 10.6 *p. 13*) or the application is closed [X], if the checkbox "On/Off Email Stop" is active, similarly to the previous case the led "Error when Send Email" turns red and the popup "Error E-mail Send" appears with the "Please check E-mail configuration" warning.

If you experience errors when sending emails during system operation (after you press the "START ZONES >>" button), the checkbox "On/Off Email Faults" is disabled to prevent any software malfunction due to an unnecessary attempt to send emails and the LED "Error when Send Email" turns red.

10.5 ZONE PAGE (ZONE1:, ZONE2:, ... ZONE10:)

Each zone page allows you to view and interact with the operation of the zone it represents.
The zone pages "Zone1:", "Zone2:",..., are named in the "Pre Configuration" screen (Figure 10.2 *p. 6*). For example, if you wrote "Test1" in the "Name Zone1" field, the corresponding screen is named "Zone1: Test1". If the "Name Zone" field is left blank, the corresponding screen is named after the zone number (example "Zone2" if the "Name Zone2" field is left blank).
The zone pages are active together with the system from the moment the "START ZONES >>" button is pressed in the 10.3 *p. 7* page.
When all the gas heaters are activated, the red "STOP" button appears (Figure 10.6 *p. 13*).
The "STOP" button allows you to:

► Stop the system by putting all gas heaters on standby.
► Return to the Home page "Pre Configuration" keeping all set parameters until the "START ZONES >>" button is pressed.

For each zone (up to a maximum of 10), a page is available that shows (Figure 10.6 *p. 13*):

► In the column **ID GR** the progressive number of the gas heater. A progressive number that goes from 1 (first generator in the first zone) to the number inserted in the "Number GRs Connected" field of the "Pre Configuration" page (Paragraph 10.2 *p. 5*), which corresponds to the last gas heater in the last zone. In each zone there will be a number of lines equal to the number entered in the column **Number GR** for that zone (Paragraph 10.3 *p. 7*).
► In the column **Tsetpoint [°C]**, the gas heater setpoint. The setpoint value is the one present in the active table among the four available according to the selected "Active Tab:" parameter, at the current time of day and day of week, see Paragraph 10.3 *p. 7*.

The value of "Tsetpoint [°C]" can only be changed if "INDEPENDENT" is set in **Winter/Summer** column, see Paragraph 10.3 *p. 7*. To change the value double-click the cell and enter the new value. If you change the value on this page, it will only remain active until the next time slot and will not be saved.

► In the column **Tprobe [°C]**, the temperature value read by the room probe on board each thermoregulator.
► In the **Operating** column, the gas heater type of operation:

- "OFF" when off.
- "STAND-BY" if the burner is not ignited but the gas heater is available by the control system. The gas heater may be in "STAND-BY" because it has reached setpoint temperature (Figure 10.5 *p. 10*), or for faults, reset in progress, etc.
- "Running (MIN power)" if the burner operates at minimum power (Figure 10.5 *p. 10*).
- "Running (MAX power)" if the burner operates at maximum power (Figure 10.5 *p. 10*).
- "Ventilation" if the gas heater only operates the fans (burner off).
- "Lockout" if the burner is off due to a fault.

► In the **Fault** column, the type of fault present on the gas heater.

- "None", if no fault is detected.
- "Lockout of burner control unit" burner control unit fault, reported by the software with an error message (and sends the email as well as writing it to the log file, if these services have been activated) specifying the number of the gas heater in fault and which zone it belongs to. The fault can be reset by the corresponding button in the **Reset** column. During the error, the word "E1" flashes on the display of the thermoregulator.
- "Anomaly on used probe" fault detected in "INDEPENDENT" or "Safety temperature" heating mode, when the room temperature probe does not work correctly. The burner is turned off (standby). The software reports the error message (and sends the email as well as writing it to the log file, if these services have been activated) specifying the number of the gas heater in error and which zone it belongs to. The error cannot be reset and turns off when the ambient probe returns to correct operation. During the error, the message "E2" flashes on the display of the thermoregulator.

In case of operation in "ASSISTED" mode, since the regulation does not use the thermoregulator's ambient temperature probe, the error "Anomaly on used probe" is not generated and in case of probe malfunction the software considers an ambient temperature of 0 °C; consequently the average temperature is altered and the gas heaters will tend to operate at maximum power.

- "5 remote resets in 15 minutes reached - Reset not accepted" fault generated by 5 resets performed in less than 15 minutes. The fault can only be reset by pressing the RES/FUN button for at least 3 seconds from the corresponding thermoregulator. During the error, the message "E4" flashes on the display of the thermoregulator.

► In the **Reset** column, the button to reset any fault. If a resettable fault is generated, the button corresponding to the gas heater in alarm is activated and the message "OK" is replaced by "RESET". When the button is pressed, it turns off and the "RESET" message is replaced by "Wait" until the fault is reset.

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► In the column **State**, the status of the gas heater in the system. The status is visible and modifiable through the drop-down menu with the following alternative choices:

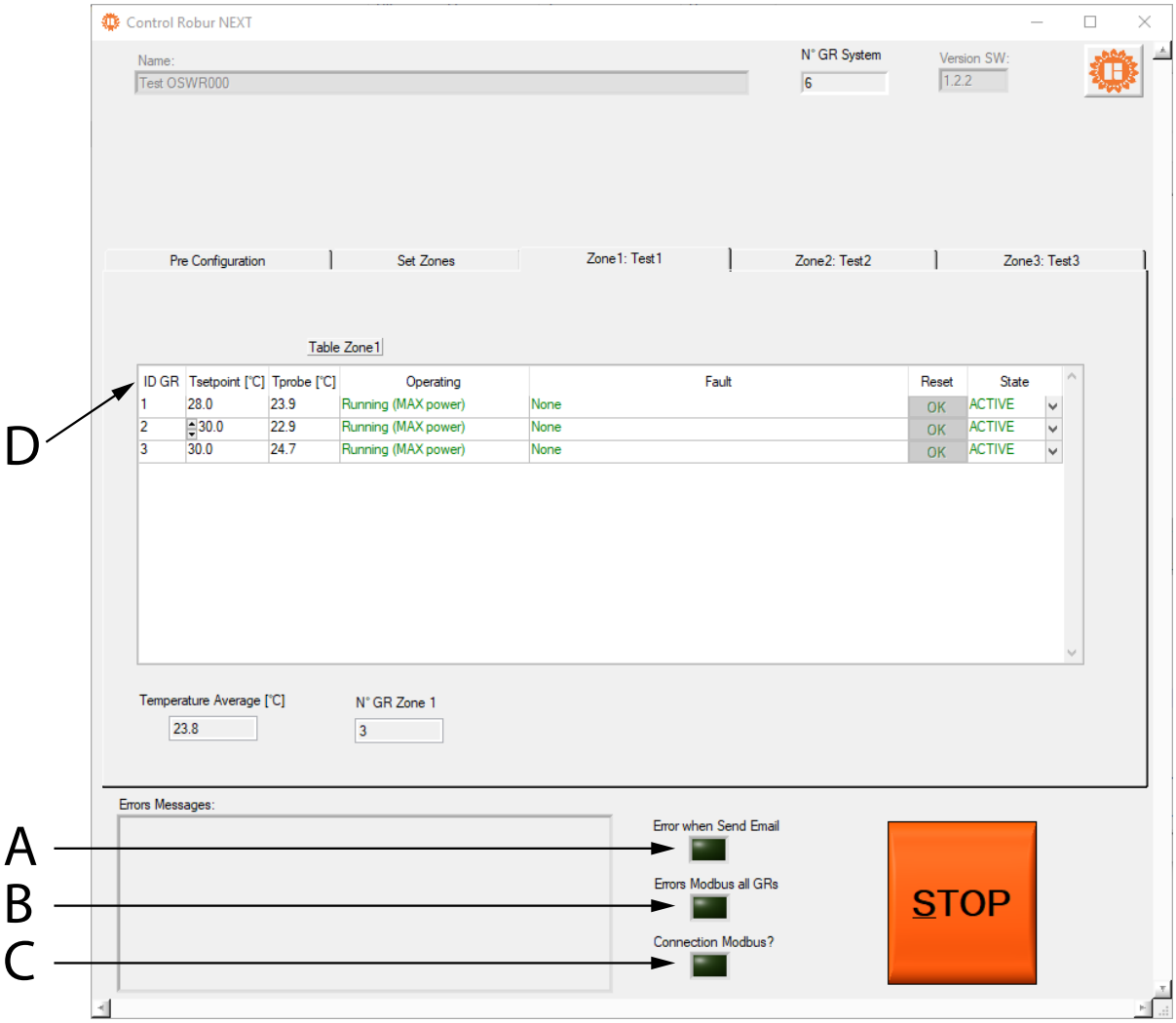
- "ACTIVE" when the gas heater is used for heating or ventilation. The single gas heater can be activated by changing the choice from "EXCLUDING" to "ACTIVE".
- "EXCLUDING" when the gas heater is not in use. The status can be "EXCLUDING" for the following reasons:
  - All gas heaters in a zone are automatically excluded if the **Functionality** column (Figure 10.3 *p. 7*) is set to "OFF" for that zone. All gas heaters in a zone could be excluded for maintenance purposes, for example. Every single excluded gas heater can be activated by setting "ACTIVE" in the **State** column. If the value is changed, it will remain active only until the next time slot and will not be saved. To reactivate all gas heaters in a zone, change the setting in the **Functionality** column for that zone from "OFF" to "PROGRAM" (Paragraph 10.3 *p. 7*).
  - The single gas heater is automatically excluded if a Modbus error occurs. The software reports the error message (and sends the email as well as writing it to the log file, if these services have been activated) specifying the number of the gas heater in error and which zone it belongs to. The fault can be reset manually by selecting "ACTIVE", or automatically when the Modbus communication problem ends.
  - The single gas heater is manually excluded by selecting "EXCLUDING", for example for maintenance.

Do not interrupt the power supply and/or the Modbus connection to the excluded gas heaters as this generates faults.

If you have only removed power from some thermoregulators, such as those selected as "EXCLUDING", before turning them on again press the red "STOP" button (Figure 10.6 *p. 13*), that allows you to interrupt the communication and avoid any Modbus errors.

You can activate the sending of emails of these faults (with checkbox "On/Off Email Faults") and record them in the event history (with checkbox "On/Off Data Logger"). With "On/Off Email Faults" enabled events are reported when they occur, with "On/Off Data Logger" enabled events are recorded when they first occur and when they end.

Figure 10.6 *"Zone1" page*



A When it is red it indicates an error in sending emails
B When it is red it indicates that all thermoregulators are excluded due to an error on the Modbus network
C When it is red, it indicates that the software is trying to reconnect the thermoregulators to the network
D Indicates the identification number assigned by the software to each gas heater according to the parameter Address (Ad) set on the thermoregulator connected to the gas heater.

10.6 APPLICATION OR PC CRASH

If the PC on which the Genius software is installed and to which the gas heaters are connected is shut down, or if the Genius software is closed without the "STOP" button having been pressed first (Figure 10.6 *p. 13*), communication is interrupted.
At this point the gas heaters will either shut down or, if the safety temperature parameter (Paragraph 8.3 *p. 3*) has been correctly configured, they will automatically set themselves to safety mode heating.
If the PC is switched off (deliberately or due to a power failure), the Genius software must be manually re-launched after the PC has been restarted, as it does not restart automatically even if it was running at the time of switch-off. Alternatively, you can (if your PC allows it) set the automatic restart as soon as the power is restored, and set the Genius software to start automatically with the operating system. In any case, even if the Genius software is started automatically, it does not start up the system autonomously, even if the system was active when the PC was switched off. The system start-up operation must therefore be carried out manually in any case.

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INDEX OF CONTENTS